

THE MEDICAL EXAMINER.

DEVOTED TO MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

EDITED BY J. B. BIDDLE, M. D. AND M. CLYMER, M. D.

No. 15.]

PHILADELPHIA, WEDNESDAY, JULY 18, 1838.

[Vol. I.]

VARIOLA, OR SMALL-POX.

By N. CHAPMAN, M. D., *Professor of the Theory and Practice of Physic, in the University of Pennsylvania.*

(Continued from page 219.)

As inoculation is a voluntary proceeding, it may be so regulated generally, as to time, and other circumstances, as to ensure the most favourable result.

The mild weather of spring and autumn, affords the best seasons; and an age not earlier than six months, should be preferred. Children, of debilitated or vitiated constitutions, are to be excluded,—except where a strong necessity exists; and the same restriction applies, indeed, to individuals of every period of life. The disease proves milder in early, than adult or more advanced age.

Formerly the preparation of the system, so called, was deemed of the utmost importance, and the same notion, even at present, is, by many, entertained. The old practice consisted in a great reduction in diet,—the avoidance of all heating, or stimulating causes,—in bleeding and purgation, and lastly, in a mercurial, and antimonial course of ten or fifteen days, or for double this period. There was, too, to use the somewhat exaggerated language of Jenner, “bleeding till the blood was thin,—purging till the body was wasted to a skeleton, and starving on vegetable diet, to keep it so.” Excepting the omission of mercury, and commencing the other preparatory measures, subsequently to the act of inoculation, the same restricted and medicated plan continued, for the most part, to be pursued.

By some very able practitioners, however, the utility, and even propriety of this sort of preparation, is utterly denied. Being in a sound state, the system, it is maintained, will more effectually bear with, or resist, a morbid attack, than when the order of health is partially subverted, which it must be, by the disturbance it receives from the action of medicine, or any sudden change in the habits of life.

The correctness of this doctrine in its general application, as well as in relation particularly to the case before us, I think is amply confirmed. Cullen, who agrees with me as to the latter, says:—“I doubt on the whole, if inoculation derives any advantage from those pretended preparatory courses of medicine.”

Let it not, however, be understood, that the doctrine goes so far, as to deny the necessity of an alteration in a course of living, of undue indulgence, or other bad habits. The constitution, under such circumstances, is already vitiated, and before it is infected by the disease, ought to be rectified.

Great importance was also attached to the procuring of matter from a mild case. But it having been ascertained that this has not the slightest influence, it came to be disregarded. The most

lenient and distinct small-pox will produce the confluent and malignant, and conversely, the result being dependent on peculiarities of constitution, or the mode of treatment, or some other adventitious cause.

That a contrary opinion has been maintained, must not be concealed, and, I shall recite the strongest fact I have met with to sustain it. By Adams, then physician to the London Small-Pox Hospital, it is related, that adopting the notion of the power to mitigate the disease by successively inoculating from the mildest cases, he accordingly made the experiment, and, as he says, ultimately attained complete success. His plan was to select the virus from a peculiarly benignant variety of the disease, which he occasionally met with, having an eruption of a pearly-like appearance, attended by very slight constitutional disturbance, and thought, that after a long train of breeding, he had firmly and immutably fixed it as a milder stock from which to propagate. This statement, could it be received, would be entitled to great weight. But without impeaching its truth, it seems to involve a consideration, which goes far to its invalidation, or, at least, to cast over it a very dark shade of doubt. It will be perceived, that the experiment was made with a form of the disease, whose identity with genuine small-pox does not appear to have been adequately made out, or verified, and at all events, as we hear of no confirmation of it, we may presume that it proved fallacious.

In the act of inoculation, the virus is inserted under the cuticle, or rubbed into a small incision by a lancet. The other modes once practised, such as the application of a small piece of thread previously drawn through a pustule, or soaked in the matter, to a scratch, and confined by strips of adhesive plaster, were finally abandoned. From a notion that greater security was given by a multiplication of infected points, this course was pursued, two or three inoculations being performed on each arm. Camper, however, having demonstrated by a series of cautious experiments, that a single puncture was as effective, producing as large a crop of pustules, and affording equal protection, as any number up to seven, which was the highest he deemed necessary to try, we became content with a solitary inoculation. But though the quantity of virus used, be of no consequence as to the specific effect, care should be taken, not unnecessarily to enlarge or irritate the wound, as common inflammation may be set up, by which the design of the operation is defeated, and a troublesome sore ensue in its place.

On the third, fourth, or fifth day, the inoculated point begins to inflame, and at this time, is merely a small red speck, which progressively increases, till the close of the seventh day, when the constitutional symptoms manifest themselves. Be it again remarked, as deserving of attention, that there

is a material difference in this respect, in the two forms of the disease. The system becomes affected, as we have seen, in the inoculated, on the seventh, and, on the fourteenth day, in natural small-pox. It teaches us, that where an individual is exposed to the infection, its operation may be superseded by inoculation, and a milder disease substituted in place of that which might otherwise take place.

The inoculated disease makes its incursion by the ordinary concomitants of pyrexia, with the addition of soreness and incipient tumefaction in the axilla of the affected arm. Great difference, however, exists in the degree of constitutional disorder. It is sometimes so slight, as hardly to be perceived, while on other occasions, it is considerable, and does, though rarely, present every gradation of violence. The case in its progressive evolution, being very similar to that of the natural disease, the history of it need not be recapitulated.

Concerning the treatment, it may suffice to state, that when mild, little is required to be done, and in the more vehement, or malignant forms, which I have said seldom occur, the course to be adopted is such, as has already been suggested, under a like circumstance, of the casual disease.

But here a question arises, which demands the most serious examination. It involves the no less momentous consideration, than what are the signs, or criteria, by which we are to determine in the case of inoculation, whether the system has been so affected by the process, as to have its susceptibility destroyed to future attacks. This is a point still so unsettled, that it is exceedingly difficult to arrive at any satisfactory conclusion, or definite and secure course of proceeding. It was, in the later periods of inoculation, a common conviction among practitioners, that a distinct pustule, with swelling in the axilla, and some febrile movement, afforded sufficient evidence of the constitutional affection, and under such a conviction, they acted accordingly in practice. The late professor Rush, especially, inculcated this doctrine. Not wanting indeed, are some, who have gone so far as to maintain, that an unusually severe attack, instead of doing away susceptibility, is rather to be construed as an indication of the endurance of such a portion of it as to endanger a future recurrence of the disease. But we have much reason to suppose neither opinion is true, and that in many cases, at least, even when the disease is naturally acquired, an infinitely stronger impression is necessary, to afford an adequate protection, and especially during an epidemic prevalence of the disease. The early writers, their immediate successors, and down to comparatively modern times, hold this language, and are filled with admonitions against a reliance on too slight an affection. It is reiterated by them, that even a considerable eruption, running regularly through its stages, and still more so in the anomalous forms of the disease, whether natural, or artificial, does not in all instances, furnish the requisite security. That a contrary opinion was held by some, cannot be denied, and more especially by those, who in the enthusiasm of the moment, were desirous to enhance the value of inoculation.

Devoted to the cause, and blinded by the spirit of controversy, they overlooked all difficulties and

objections, and presented the case in the most favourable aspect, contending, that the slightest affection was adequate to the end, so completely removing all susceptibility, as to preclude for ever the danger of any repetition of attacks.

We now know this to be the illusive language of mere votaries, and that a careful practitioner will not fail, in suspicious cases, to renew the operation at some short interval, as a test and a safeguard.

(To be continued.)

Suggestions, in relation to the Examination of Recruits for the Naval Service. By THOMAS WILLIAMSON, M. D., Surgeon of the U. S. Navy.

U. S. NAVAL HOSPITAL. }

Near Norfolk, Virginia, June 26th, 1838. }

Gentlemen:—As we are frequently called upon to examine persons for the naval service of the United States, I would suggest to such medical officers as have this duty to perform, the following specific instructions, viz. :

To guard the naval service more effectually from the introduction of improper persons into it, and to prevent the diseased, disabled, and worthless from being admitted, it is necessary that the following regulations be rigidly enforced by all medical officers, and others, at our various recruiting stations, and elsewhere, when recruits are required for the service.

1st. The applicant must be sober, perfectly naked, and, then, with the greatest care and attention, are to be examined the peculiar structure of his head, chest, abdomen, pelvis, and extremities, his respiration, pulse, vision, hearing, speech, smell, taste, and touch.

2d. All diseases, defects, and blemishes, that would disqualify a recruit from being placed instantly on laborious duty, must prevent his being received into the service; such as the loss of a limb or limbs, distortions of the bones, caries, exostosis, nodes, necrosis, dislocations, extensive fractures, great deficiency of teeth, old age, loss of toes, or fingers, rigidity, or disease of the joints, loss of motion, or sensation in any of the muscles, derangement of the brain, or nervous system, extensive abscesses, ulcers, tumors, fistulæ, chronic diseases of the mucous membranes, venereal affections, diseases of the chest, scrofula, and all other diseases of the glandular system, visceral obstructions, herniæ, dropsies, enlarged abdomen, organic affections of the heart and arteries, varicose veins, marks of old ulcers, unhealthy appearance of the shins, and cutaneous eruptions.

3d. Defects:—the loss of an eye, ear, or part thereof, the organs of generation, finger or fingers, toe or toes, and other deficiencies that are palpably so, must be rejected. Blemishes that are unsightly, such as marks of punishment, extensive scalds, and burns, wounds, hare-lip, extensive cicatrices, are also to be rejected.

If the above directions are attended to, the disadvantages resulting to the naval service, would soon cease, and we should not hear our commanders and surgeons complaining so often of the unfitness of the men shipped for the naval service. A great difficulty has arisen with us all in not having some specific instructions to direct us in the examination

of recruits, much being left to our discretion. The consequence has been, that some surgeons will pass a man with a disease, whilst others would reject him. The question arises, whether any one shall be received into the naval service who has any disease upon him? I should unhesitatingly answer that he should not. If men are to be rejected on account of disease, what are the diseases which ought to cause them to be rejected? Are defects and blemishes to be rejected? I answer, yes, as much so as if they were diseased. I therefore, gentlemen, believe, that if the directions which are hinted at in this, are followed, a happy result will be the consequence.

THOMAS WILLIAMSON.

To the Editors of the Medical Examiner.

CLINICAL LECTURES.

LECTURES ON CLINICAL MEDICINE, *delivered at the Philadelphia Medical Institute, by W. W. GERHARD, M. D., Physician to the Philadelphia Hospital, &c.*

GASTRITIS.

Tuesday, June 12th.—I shall now enter upon the subject of inflammations of particular mucous membranes. In my general lecture I have already stated that in these inflammations, you must not expect the same regular series of symptoms, that occur in the inflammations of other tissues; nor can you always detect with certainty their existence. The appearances they present after death are, likewise, often deceptive. Just as the redness, dependent on an erysipelatous condition of the skin, disappears after death, so may the traces of inflammation of the mucous membranes. You cannot, then, trust, entirely, even to pathological anatomy, to ascertain its presence, although the thickening, and other appearances which I detailed in a former lecture, are usually sufficient to enable you to arrive at a tolerably satisfactory conclusion.

To study properly the symptoms of inflammations of the mucous membranes, we cannot do better than follow the plan, hitherto employed, of carefully examining the history and symptoms of particular cases. For this purpose, I shall now bring before your notice a case, recently under treatment at the hospital, of severe gastritis, brought about by excessive intemperance. It is that of William Rogers, in ward No. II., an Englishman by birth, and resident in this country for nineteen years. He has been living for five months, on the West-Chester road, and was well until within the last three weeks, when he was taken ill, with loss of appetite, and irregular chills, but without pain across the stomach. He was drinking, during the Easter holidays, and continued the frolic for four weeks. The vomiting began only a week before his entrance,—he had previously felt anorexia and nausea, but no pain. He was slightly costive; there had been no delirium, but some confusion of the intelligence. For three days before his admission, he had been vomiting blood in large quantities, which continued till the moment of his entrance. There was no previous treatment; nor was the mind of the patient sufficiently clear for him to recollect other symptoms than those just detailed.

He is subject to fits, and had several on the day of his entrance, besides those which will be afterwards mentioned.

You see here, that the powers of the stomach, which had been over-stimulated by alcohol, gave way—but without much complication of cerebral symptoms. There was vomiting of pure bile, indicating gastritis, and afterwards of blood, which, as there was no cough or disease of the chest, we ascertained to be a genuine hematemesis, and not hemoptysis,—it was a simple effusion from the mucous membrane of the stomach. The symptoms, therefore, which were present, previous to the man's entrance, denoted severe inflammation of the stomach. At the time of his entrance on the 14th of May, they were as follows:—

The skin was pale and yellowish; not much emaciation. Eyes extremely prominent; pupils small; dulness of expression; mouth strongly compressed, but no distortion. No cephalalgia; giddiness, and, at times, a little ringing in both ears. Intelligence regular, but feeble. Skin dry and harsh. Pulse 104, feeble and small. There was no soreness in the epigastrium, nor any tumor in the region of the stomach. I examined particularly if there was a tumor, because hematemesis is often a sign of a cancerous affection of the stomach, which, in an advanced stage, can be detected by percussion and by the touch. There was constant eructation; bowels open, except for the last two or three days. Constant nausea, and discharge by vomiting of a liquid, of the colour of Spanish brown, slightly curdled, apparently altered blood without smell, and coming up with very little effort. No cough. Milk and water was ordered for drink, in small quantities.

R. T. Opii,	gtt. v.
T. Cinnamoni,	gtt. x.
Sodæ Bicarbonat.	gr. x.
Aquæ Cinnamoni,	℥ss. f. sol.

M.

Sig. To be taken every half hour.

No ice, or remedy of this kind, was ordered, because the patient had been accustomed to stimulate the mucous membrane of his stomach with a large daily allowance of spirits. Now in these cases the very best remedy is usually a stimulant, of a less irritating nature than that to which he has been accustomed.

On the fifteenth, the man vomited, seven or eight times, a thick curdy liquid, like gruel, without blood. At two, P. M., he began to take ice, at frequent intervals, and vomited occasionally after it, but less frequently. The eructations continued. No stools. Same feebleness, and pale, waxen colour of the skin. A blister was applied to the abdomen, at two, P. M. The mixture was discontinued, but from mistake a few more doses were taken.

On the sixteenth, the vomiting was much less frequent, having occurred only once or twice since the morning, and consisted chiefly of the liquid swallowed,—probably from a very slight admixture of blood, it was of the colour of Madeira wine and water. The man had taken no food. Same stupor; but the intelligence clearer, and he complained only of drowsiness; felt the blister. Less nausea; same paleness and sallowness of the coun-

tenance; anorexia and constipation continue. Convulsive fits without distortion of the mouth. Pulse 92, tolerably full. Skin of the hand warm. Ice continued. A tea-spoonful of brandy every half hour, and, if desired, a biscuit or two soaked in brandy and water. A common injection.

On the eighteenth, no tenderness in the abdomen, except externally. Dulness of the intellect less. Tongue moist and clean. No vomiting. Bowels twice open. Less stupor. Appetite returning. Pulse 80, soft and small. Skin of the natural temperature. The quantity of brandy given was reduced to two ounces a day. Ice continued.

On the twentieth, ice had been continued occasionally; two ounces of brandy were given each day. Four crackers taken, without vomiting; and a little gruel on the nineteenth. Still, belching of wind. Strength rather greater. Less stupor. Same complexion and fixed expression, with widely opened, staring eyes. Appetite returning; no abdominal soreness. Pulse 76, regular. Diet increased to six crackers and more gruel.

Twenty-first, same expression of countenance; pupils strongly contracted. No vomiting or purging. Abdomen rather hard, tympanitis. No tenderness at the epigastrium. Pulse 80, rather full. Brandy suspended. Infusion of ginger; crackers, gruel.

Twenty-third, no vomiting; great feebleness. One or two stools in twenty-four hours. No nausea; tympanitis. Appetite better; skin cool. Began yesterday a grain of quinine and ginger every three hours. Convalescence was more established.

Diarrhœa began on the twenty-eighth; had five or six stools, without griping, thin, yellow, and watery, without blood. No chill. No assignable cause, except the change in the weather, which became much warmer. Took quinine until the twenty-ninth, when the oleaginous mixture and a few doses of the chalk mixture were given him, and he is now free from diarrhœa.

Discharged, June 11th. Convalescence uninterrupted after last date. No return of diarrhœa; eructation continued; appetite good. Strength increasing. A vacant expression of countenance remained.

Now, we have here an example of a mild type of gastritis. The vomiting was the main symptom here, and, usually observed in most cases, is not necessarily present in every variety of gastritis. It may occur in very slight forms of the affection, and, on the other hand, erosion of the mucous membrane of the stomach may take place, without the existence of vomiting. In tolerably severe cases, it is generally present, and it will be found a very certain symptom of gastritis of moderate intensity; it may be wanting if the gastritis be exceedingly slight, or of great severity, nervous excitability, in the latter instance, being extinguished by the intense inflammation.

The absence of pain, in this case, can readily be accounted for, by the complication of epilepsy. Certain symptoms, belonging to the regular train of every disease, you may expect to find absent, in all diseases: in this case, it is the pain, that is wanting. Pain, you already know, is a symptom, that is absent in inflammations of the serous membranes, occurring in old persons, and in those

whose nervous sensibility is impaired from a disorder of the brain. It is much more frequently absent in intense inflammations of the mucous membranes of the bowels, if stupor be present, for the natural sensibility of those membranes when inflamed is much below that of the serous tissue.

The constipation is the next symptom to be attended to. As a general rule, it denotes the absence of enteritis; indeed, gastro-enteritis rarely begins with the stomach, to pass thence down to the lower portion of the intestines; although, as you will see in severe cases of dysentery, the reverse is almost always true, and the disease extends upwards from the colon to the stomach. There was, likewise, in this case, no tension in the region of the stomach, a common sign of acute gastritis. Nor was there any pain on pressure, or tympanitis; so that the symptoms were, in a great measure, limited to the vomiting. The slowness of the pain may have been owing in part to the hæmorrhage, through which the inflammation found a natural outlet, which greatly relieved the severity of its symptoms, just as those of phthisis pulmonalis are relieved by a hæmoptysis.

The coolness and pallor of the skin were directly connected with the inflammation of the stomach and the loss of blood. But the condition of the tongue was not characteristic of gastritis, being moist and very slightly coated. To the state of the tongue, during the prevalence of Broussaisism, there was attached a much greater importance, than it now receives, in diseases of the alimentary canal. While I was a resident physician at the Philadelphia Almshouse, the condition of the tongue was looked upon as a conclusive sign of the disease, and even of the degree and kind of inflammation. But, the experiments of Louis, Andral, confirmed by the researches of others, have since conclusively shown, that there is no necessary connection between the condition of the tongue and that of the alimentary canal. All that you can say is, that if the tongue is dry and red, your patient probably has gastritis; but the converse is not true; that is, if the tongue be clean and moist, it does not follow, that there is no gastritis. Besides, when it is red, dry, and chopped, there is generally something more than simple gastritis, as you noticed in a late case of dysentery, at the hospital, in which there was a very extensive inflammation of the mucous membrane of the alimentary canal. The black and coated tongue, covered with thick sordes, is nearly peculiar to those cases in which there is much depression of the nervous power, such as typhoid and typhus fever, &c. It arises, in part, from an altered state of the secretions, and partly from the patient lying with his mouth constantly open, so as to allow these secretions to dry upon the tongue and gums.

Now as to the diagnosis. With what diseases could the present be confounded? It could manifestly depend only on an affection of the stomach or liver. While the man was in a state of stupor, there was some doubt, whether the gastritis was acute or chronic, and whether it was secondary, depending on a cancer of the stomach, or primary, from intemperance. The treatment, however, was such as seemed necessary in acute gastritis occurring in a broken constitution, and would have been

the same, whether it was acute or arising from cancer. It might, indeed, after the first few days of the patient's stay at the hospital, have been confounded with an affection of the liver, from the bilious vomiting, and discharge of blood, which might have taken place through the ducts of the gall-bladder. But, there was not fever enough to account for such an affection.

The next question is, was the affection of the brain primary or secondary? To solve it, we inquired into the habits of the patient; and a knowledge of them allowed us to infer, that the attack of epilepsy which occurred the day after his entrance, was produced either by the inflammation of the stomach, or by the direct vitiation or stimulation of the brain, from alcohol. The first was probably the true cause, and the affection of the brain was secondary to that of the stomach. You are aware how frequently the brain is affected, when the stomach is disordered, as in fevers, for example; now, in these cases, cerebral symptoms by no means necessarily depend on the condition of the stomach, but they form part of the train of symptoms, which constitute the disease, and often occur quite as soon as the gastric disorder. Here there was a different state of things, and the affection of the stomach was much more local, and not a mere symptom of a febrile disease. Another local cause of alteration of the cerebral functions is jaundice, as I have mentioned in a former lecture; the patient laboured under jaundice, as a consequence of the disorders of the stomach with which the liver soon sympathized, and the change in the qualities of the blood caused by jaundice, brings about a diminution of the intelligence, and especially of the memory.

Let us now examine the treatment of this case. Therapeutics are always difficult, when we come to reduce them to demonstration. Merely to prescribe is easy enough, and can be done by any old woman; but, to prescribe, so as to be certain that we will produce determinate results, is a very different affair. In fact, our remedies must often fail to produce the effects intended; and when such is the case, no *mauvaise honte* should prevent a frank confession of it. Remedies must, certainly, sometimes do harm, and it is a sacred duty in a teacher of medicine to point out every instance of such occurrences under his direction, with a manly disregard of the promptings of self-love and prejudice. I make these remarks, without particular reference to the present case; for we had nothing to complain of here, as each remedy administered produced the effect for which it was intended.

The treatment was very simple: for the brandy which the patient had been taking, we substituted at first other stimuli calculated to supply its place. We avoided using at first very powerful remedies, which should not be employed, unless clearly indicated, before the previous history of the patient is well ascertained. The remedies, at first directed, we found, however, not to be sufficient to meet the indications of the case. We then resorted to another most useful remedy, ice. The credit of introducing this article, as an ordinary therapeutic agent in the management of gastritis, belongs, I believe, to Broussais; at any rate, if before known, it was not, certainly, very generally employed with us, until fourteen years since, when

the particular doctrines of Broussais became prevalent in this city. The remedies which were found of real utility have thus, you see, survived the exclusive doctrine which caused their introduction. Thus it is with many means of treatment, which are long known, and slightly used, but not common, until they are taken up by some individual; from the general employment of them dates their origin, not from the mere suggestion of them. The ice was taken by this man very freely; he was allowed to swallow as much of it as he found agreeable. Ordinarily, in gastritis, I use the ice in solution, giving iced water as cold as possible, in excessively small quantities, such as a tea, dessert, or table-spoonful, at short intervals. I enjoin upon the nurses never to leave the quantity to the patient's discretion, for even cold water, taken in large quantity, from mechanical distention, will increase to a high degree the irritation of the stomach, and cause its immediate rejection. Chewing ice is not, in general, so useful, as taking the iced water, for the ice is often retained in the mouth till melted, when it becomes warm by being entangled with the saliva and secretions of the mouth; whereas, the iced water passes down, at once, at a temperature of little more than 32°.

The next remedy applied was a blister. The propriety of blistering, in acute gastritis, is, I think, questionable, and I am not accustomed to resort to it, unless under peculiar circumstances. The use of blisters is strongly condemned by Broussais, in the acute form of the affection; but in the gastric fevers which were epidemic here from 1820 to 1828, the propriety of blistering was fairly tested, and the conclusion was very general, that it was injurious in the early stage of the fever, but, at the close of it, after vomiting is over, and the febrile movement not great, it answers a very good purpose. The blister was of good service in our case, although I cannot say precisely how much benefit was due to the ice, and how much to the blister, as they were employed together.

If this man had been a robust, stout, healthy subject, and had not presented a pale and prostrated aspect, the treatment would have been very different. We should have bled him largely, and afterwards leeches him, if he had suffered much pain on pressure in the region of the epigastrium; otherwise, we should have cupped him: if there is any considerable degree of pain, cupping is a very distressing application. Fomentations and poultices, the best of which is that of hops, are also to be applied to the pit of the stomach. The good effects of cupping, were illustrated in the epidemic of remittent and intermittent fevers, complicated with gastritis, which prevailed between 1820 and '28, to which I have alluded; but, latterly, the epidemics have changed their character, and it is not now often necessary to resort to the severe antiphlogistic regimen, that was indicated in fevers at the time of Broussais' observations. Broussais' observations were made in the north of Italy, the fevers of which region are accompanied by intense gastric inflammation, and his treatment of gum water, diet, and leechings, was very successfully applied to them. But when he afterwards attempted to manage the dothi-enteritis of Paris, in the same style, his doctrine was no longer tenable.

Another remedy, used in the present instance, was brandy, a drachm of which was taken every half hour. This is often a very necessary remedy with drunkards, even if some gastritis be present; it may be given for a time, then suspended, and again returned to, if the patient be much prostrated. In this case, we found no other stimuli so good as brandy, and we accordingly returned to it, notwithstanding the aperient counter-indication of gastritis. The counter-indication is only apparent, for an organ long habituated to stimulation, recovers from inflammation with difficulty if all excitement be withdrawn for a considerable period.

Gastritis may be both primary and secondary. The primary type you have just had presented to you. Secondary gastritis of slight character often occurs in intemperate persons, as is the case with a man who entered the ward yesterday; he had drunk spirits till the powers of his stomach gave way. A slight gastritis, of this kind, is not to be treated by iced water, leeches, and the like, but with capsicum and carbonate of ammonia; in fact, pretty much as you manage delirium tremens: you change the nature of the stimulation, to which the patient is habituated, but you do not abandon it.

Gastritis is not a disease of great severity, recovery often taking place, even after considerable destruction of the mucous membrane. I had a preparation, which I made at Paris, of the stomach of a child, who once swallowed a quantity of a liquid, used at Paris in washing, a solution of indigo in sulphuric acid: the greater part of the stomach cicatrised, the child has perfectly recovered from the effects of the poison. You are not, therefore, to despair in any cases of severe gastritis, even in that produced by arsenic. When a poison of this kind is swallowed, as much danger is to be apprehended from its effects on the nervous system as from the local mischief in the stomach. I showed my class, last year, an excellent specimen of gastric inflammation, in the stomach of a man who committed suicide near Fairmount; he died from the effects of the arsenic, partly from the gastric symptoms, and partly from those of the brain. Softening of the mucous membrane, of which I have spoken as a sign of acute inflammation, was not present, as the arsenic had acted chemically upon it and hardened it.

The secondary gastritis which occurs in remittent fevers is very different from the primary affection. The confounding of the two was the great error of Broussais and the physiological school of medicine, every thing being treated by them as proceeding from the one source, irritation of the stomach. Broussais addressed his remedies to the gastritis solely, whereas the treatment of the gastric symptoms is now merely added to that required by the fever. The symptoms should, nevertheless, be carefully attended to; hence, if the gastritis be violent, the epigastrium is to be leeches, while you treat the symptoms of the brain by purging and cups to the head. This mixed practice is common in the West Indies, and is strongly recommended by Mr. Evans, who claims great success for it. During the day, he gives gum water, and applies leeches and poultices to the stomach, and at night he gives calomel, which, if given during the continuance of the more violent

gastric symptoms, only increases the inflammation. The French, too, are now beginning to follow a mixed practice, particularly at Algiers, where, a late work, by an army physician, informs us, the malignant intermittents of the country were, at first, managed by low diet, gum water, and an exclusive antiphlogistic regimen. They were afterwards, however, managed with quinine, which was given even when there were symptoms of an acute character, indicative of gastric irritation, remaining throughout the interval between the paroxysms. The quinine was absolutely necessary to control the fever, and it was found that the local irritation was increased in a remarkable degree; the success was vastly greater. Such facts cannot be resisted, as they proceed from military surgeons, educated in the school of Broussais, and of course imbued with his doctrines. Broussais never uses purgatives, nor are the French, generally, as much in favour of them as the English. However, in the gastritis of fevers, we must admit the propriety of purging when the vomiting and pain are not excessive. If these symptoms are very violent, purging, particularly with the drastic remedies, will aggravate the disease, but when the gastritis is sub-acute there is no objection to mild cathartics. I have examined a good many patients, who have died from remittent fevers, and the cause of death I did not attribute to the inflammation of the stomach, but to the general symptoms of the disease. These fevers are cured by quinine—how, we cannot say, but must content ourselves with merely announcing the fact. Gastritis is a constant, necessary lesion in all these remittent and intermittent fevers, as far as we can judge from the symptoms during life, and the appearances after death. The gastritis, which is one of the anatomical lesions, is not the primary or essential disturbance. So also, in typhoid fever. No artificial gastritis ever produces the same affections of the brain and lungs that you meet with in these fevers of warm climates. The mucous membrane of the stomach may be entirely destroyed, and the patient recover without any such train of symptoms.

During the heat of summer we have many cases of gastritis from the effects of very cold water upon the stomach. These cases are confined to persons who have become excessively overheated and imprudently swallowed a large quantity of cold water, either iced or from the well. You have seen two such cases, both of which have recovered. We interrogated them carefully as to the circumstances under which their illness commenced. One had walked a considerable distance and drank largely of cold well-water; he immediately was seized with spasms at the stomach, followed by complete loss of consciousness. After he recovered his senses he was still giddy and feeble for a considerable time. The second was at work at the Exchange, carrying coals in one of the hottest days of the month. He was already languid and a little giddy in the morning, but at 11, A. M., drank about a pint of iced water; he immediately felt pain at the epigastrium with increased weakness and giddiness, and entered the hospital on the third day with a smart attack of gastritis.

Now you see the same cause occurring under the same circumstances, occasioned in the one pa-

tient decided gastritis, and in the other the affection of the stomach was much less than that of the brain. Both of these patients were in full health. The one in whom cerebral symptoms predominated had a slight valvular disease of the heart; the other was phthisical. A third case of very recent gastritis occurred at the beginning of the month, from drunkenness and exposure to the sun; the patient had not taken cold water. You may, therefore, understand from these cases that inflammation may arise from the direct effect of a stimulant, or from the reaction following a sedative.

Gastritis occurs as a secondary affection in almost all diseases in which there is much fever. Thus, the vomiting of the liquid like coffee-grounds, which takes place in acute phthisis, indicates the existence of gastritis, as has been observed by Dr. Louis. In typhoid, and, more rarely, in typhus fever, there is derangement of the stomach and of the brain, the sympathies of which are more various than even those of the stomach. In chronic phthisis there are often gastric symptoms. If there be severe pain and sensation of heat at the liver and epigastrium, the treatment is to be addressed to the stomach; you must stop the administration of porter, or other stimulating articles, and confine the patient to milk and farinaceous diet, but you are not to treat the case as idiopathic gastritis, or resort to more energetic means than strict abstinence.

For a complication of gastritis with pneumonia, no particular treatment is demanded, except that the propriety of giving tartar emetic for the latter affection then becomes questionable. Tartar emetic differs from other poisons, in attacking the follicles of the mucous coat of the alimentary canal. The inflammation of the follicles thus produced in pneumonia might be mistaken for that following dothi-enteritis, but is to be distinguished from it by the subjacent cellular coat of the follicles not being attacked, also by the nearness of the affection to the stomach, and by the absence of those alterations of the spleen and mesenteric glands, so constant in typhoid fever. In the administration, therefore, of high doses of tartar emetic in pneumonia, say half a grain every two hours, you must remember that inflammation of the follicles may ensue; and you must be particularly careful if you have any considerable degree of stupor, as it may mark this variety, gastro-enteritis.

The connection between gastritis and enteritis I shall enter upon, at a future lecture.

DYSENTERY.

Tuesday, July 10th.—I have been for a long time designing to address you on the subject of dysentery, but have preferred waiting, until a case illustrative of it should present itself. We have now a case in the wards, and as, owing to the season of the year, and the heat of the weather, diseases of the alimentary canal will no doubt be soon unusually rife, I cannot do better than enter now upon this topic. In a preceding lecture, I occupied your attention with the subject of acute gastritis, and the natural passage from this subject would have been to that of chronic gastritis; but inasmuch as it is very obscure in character, and there are diseases now prevalent, of a more active nature, I prefer postponing it to the latter end of my course.

We shall proceed to the subject of inflammation of the alimentary canal. The first illustration I shall bring before your notice, is that of a man who died a few weeks ago in the lunatic department of the almshouse. He had a dysentery, which had remained unchecked for six or seven days, and presented at the time I saw him, the symptoms of excessive pain, involuntary stools, discharges very foetid and containing blood, with a thin, dark liquid, parched and dry tongue, great thirst, anorexia, and excessive feebleness. His history could not be learned, from the condition of his intellect. The treatment, in his case, was limited to opium and slight mercurials. The fatal character of the affection I predicted from the first, and I have instanced it, particularly, to call your attention to the fact that lunacy predisposes to death, in dysentery, with astonishing force. As the symptoms are necessarily, to a degree, latent, they are less amenable to art.

The next case I shall mention, is a fatal one that occurred in May last; not, however, in my own ward. The symptoms, at the time of the man's admission, were involuntary, foetid, and bloody stools; dry tongue, and frequent, feeble pulse. He died a few hours afterwards, having taken opium, with a small quantity of ipecacuanha and calomel. After death, we found in the large intestine, large rounded ulcerations, with disease of the follicles, the intervening mucous membrane swollen, and of a deep purple tint, as occurs, between the ulcerations, in all severe dysenteries, when the whole mucous membrane is not involved. But, in a more advanced stage of the disease, the ulcerations are vastly more extensive; they begin in the follicles, but afterwards run together, so that, in very bad cases, the whole circumference of the colon becomes one vast ulcer, while, in the cæcum and rectum, the ulceration is confined to the follicles. It is most rapid and proceeds with the greatest violence, in the sigmoid flexure and transverse colon.

The cause of the ulceration lies always in disease of the follicles. If a patient die at an early period of the affection, you can detect in each follicle a distinct, rounded ulcer, with a deep, central point, of a dark colour. Usually, the follicles are redder than the rest of the mucous membrane, and seem to be in a more acute state of inflammation. These are the appearances, common in dysenteries, of a moderate type. When it is of a more severe grade, the inflammation is of a different character. The intervening mucous membrane between the follicles, instead of being swollen and red, is livid, blackish, and presents a sphacelated appearance. This occurs, to a considerable extent, when dysentery is epidemic, as was the case last year, in my ward, at the hospital, when the mucous membrane of nearly all the bowels, which we examined, was in a sphacelated condition. This is the worst form in which the disease can show itself, and if you ascertain that it exists, during life, as you can usually do, by the gangrenous fœtor of the dejections, you may expect a fatal termination.

Another variety of anatomical lesion occurs in dysentery, but rarely except in that of the insane, and in that which sometimes complicates measles. There is deep inflammation of the mucous membrane of the colon, which is of an intensely red or

purple colour, with patches of false membrane, spread over its surface, like a coating of mortar; if the inflammation reach the small intestine, they follow the shape of the *valvulae connirentes*, which appear quite incrustated with it. These granules show themselves, wherever they have not been destroyed by the ulceration. The prognosis is here very severe; but, of course, the condition of the intestines can be merely conjectured, from the symptoms. If patches of false membrane are thrown out, with blood, from the bowels, the inference is plain enough: this type of the affection is, however, less dangerous than the *sphacelated*.

These are the anatomical characters of all the varieties of dysentery. In severe epidemics, you must bear in mind, however, that you will meet with a number of cases, where the morbid phenomena will differ in intensity, from what the symptoms had induced you to expect. Again—although the colon is to be considered as essentially the seat of dysentery, there will be other symptoms, independent of this local cause, owing to the extension of the disease, and its impression upon the nervous system. The symptoms, connected with the extension of the disease along the course of the alimentary canal, are those which involve the stomach. They are thirst, strong desire for drinks, and intense vomiting: towards the latter stages of the disease, if these symptoms are combined with a dry, red tongue, they are to be considered grave, and the patient will resist all medication, because the stomach will retain neither medicine nor food. The nervous symptoms, in some cases, are not, it would seem, connected, with the state of the colon, being often intense, while the lesion of the latter is very slight. In epidemics, you will often have a severe development of nervous symptoms, and, after death, you will find nothing in the alimentary canal, to account for them. The disease cannot, in these cases, be merely of the intestines, but must be, therefore, in part at least, nervous, depending on some cause acting on the whole system.

The present patient has been ill, since the fourth of July. He is a native of Germany, has been five years in this country, and is of temperate habits. Since he was taken ill, he has been constantly getting worse, passing blood, since the fifth, in increased quantities on the sixth, and afterwards. He has had constantly severe pain, much increased for the last two days. He has had great thirst, but abstained from drinking, thinking it would do him harm. Appetite almost lost; no vomiting. He took some draught at an apothecary's, the nature of which he does not know.

His present state is the following:—Air of exhaustion, face reclining to one side, lips a little dark, face slightly flushed, dull look. Tongue coated with a yellowish fur, reddish at the edges, and rather dry. Thirst, anorexia. Stools incessant, six or seven in the last few hours, a little very thin mucus in the last stool, blood in the preceding stools. Abdomen rather full, very tender every where, especially over the transverse colon. Pulse eighty-four, soft and full; voice a little fluted in tone. This fluted tone of the voice is by no means rare in affections of the alimentary canal, and is an almost constant symptom in Asiatic cholera.

The man had no cough nor eruption on the skin. The discharges were tested, and the feces and perspiration were found very alkaline, and the saliva, slightly so. The urine alone remained slightly acid, so that the acid character of the perspiration was totally lost, and that of the urine was very much diminished.

The symptoms here, then, are evidently those of dysentery. It is a disorder which may attack the patient either suddenly or some time after the occurrence of a diarrhoea, usually the latter, some interval elapsing between the appearance of the simple diarrhoea and the dysentery, just as bronchitis passes into pneumonia. As soon as the disorder attains the point of dysentery, the stools diminish in quantity, are voided with pain, contain some tenacious mucus and lose their fœtor. The pulse becomes small and quick. The other symptoms are not quite so regular in their occurrence. There is generally pain in the abdomen, most intense in the region of the transverse colon, though not confined to this spot. There is great thirst, the appetite is lost in severe, though not entirely in mild cases. There are well marked cerebral symptoms in many cases, although they are by no means universal. There is never any alteration of the intelligence during the height of the affection, as in fever; when it occurs, it is always at its end, and is brought about by nervous prostration; whereas, in typhoid, bilious, and remittent fevers, it is an early and principal symptom. There may be in dysentery, extreme sighing, subsultus, and insomnia, but very rarely loss of memory. In this case, there were merely prostration, disgust for food, and the fluted tone of the voice, in addition to the abdominal symptoms. This fluted tone, occasional in dysentery, and very common in Asiatic cholera, is a hard and shrill sound, and is not to be easily confounded with the hoarseness of laryngitis.

The diagnosis, in dysentery, offers no difficulty. It is so local an affection, and so near the exterior of the body, that, at a glance, it is recognised. When the disease is acute and epidemic, there can be no difficulty about distinguishing it; this can only occur when it is chronic or sporadic. You must be careful not to confound it with febrile or cerebral affections. The only distinction necessary in regard to the disease itself, is to divide it into its primary and secondary forms. The secondary form of dysentery is not common in winter, but occurs, during the summer, when it is epidemic; for, it impresses its character upon all diseases. Thus, in typhoid fever, there is, naturally, a very slight diarrhoea; but, when dysentery is epidemic, this becomes severe, with bloody, painful stools. Two years ago, when there were a number of cases of typhoid fever, during an epidemic of dysentery, I lost two patients, who were convalescent from the fever, but who, having been left in a weak state, were carried off by an attack of dysentery. In typhus fever, it is more difficult to estimate how much of the dysentery is owing to the typhus, and how much is independent of this cause. Last summer, when the epidemic of typhus was just ending, scarcely a case terminated without severe dysentery.

Patients, who are liable to frequent attacks of diarrhoea, as tubercular subjects, for example, may

have attacks of dysentery, which may be very readily distinguished from their ordinary diarrhœa. Last year, I had several tuberculous patients, liable to slight diarrhœas, who were seized with dysenteries of intense severity, which, from their violence, could not be confounded with the tubercular affection.

Chronic dysentery is more difficult of diagnosis, as the term embraces a number of distinct dysenteric affections. In some places, it is applied to acute dysenteries, become chronic; in other cases, there is no preceding acute affection, but the chronic disorder begins abruptly. In dysenteries, strictly chronic, to say where there is decided ulceration of the mucous coat of the bowels, and where there is mere alteration of its secretions, is sometimes a very puzzling matter. I had a case, some time since, in my ward, of a man, who laboured under a chronic dysentery, for eight months, before he entered the hospital. We tried a variety of treatment for his relief,—but he sank, presenting, some time before his death, tubercular symptoms. On examination after death, we found a few tubercles in the lungs, and the mucous membrane of the intestines softened, of a light grayish tint, rather thicker than naturally, but without false membrane or cicatrices. Had this dysentery been preceded by an acute affection, we should have ulcerations or cicatrices. This I call chronic dysentery, distinguishing it from that succeeding the severe, acute affection, with ulcerations. If a patient is moderately intelligent, it is always easy to pass back to the first invasion of the disease, and to make the distinction I have mentioned.

I have detailed to you the anatomical characters of the severe type of dysentery. But, if the patient recover, and, during his convalescence, is carried off by an accidental and independent affection, you can trace the anatomical marks that distinguish the progress of the dysentery towards a cure. The edges of the ulcerations are sunk down, less red, of a more or less slate colour, in place of the purple and dark livid hue. The bottom of the ulcer is no longer the muscular or cellular coat of the intestine, but is lined with a new membrane. Cicatrices may be known by their bluish tint, smoothness, and their being below the natural level of the membrane. In a remarkable case, I found cicatrices throughout the whole colon, a case, which had passed from the acute to the chronic form, of thirteen months' standing. From this, you may infer, that, no matter how severe sloughing or hæmorrhage may be, the patient may get well, if his constitution be good, and the mucous membrane of his bowels may be restored to a degree of cicatrization, quite consistent with health. The anatomical lesions at the close of dysentery, are the development of tubercular depositions, and the passage of the acute into the chronic form. The ulceration rarely runs into perforation. For a proper understanding of the affection under notice, you see how important is a knowledge of pathological anatomy, and how impossible it is to estimate the chances of a cure, without an acquaintance with the results of this branch of medical investigation.

Another set of symptoms, connected with dysentery, is the chemical alteration, that takes place in the secretions of the body. An impetus has lately

been given to this branch of investigation, that promises to lead to important results. The experiments of Donné on this subject are interesting. Last spring, I requested one of my pupils, Mr. Griscom, to take up the subject of the secretions in dysentery, and he produced an experimental inaugural thesis, which contained some valuable contributions to medical science, which I shall take a future occasion to communicate to you. In the case to-day, we tested the secretions, and found the feces, saliva, and perspiration very alkaline, and the urine only feebly-acid, showing a strong preponderance of alkaline matter. I followed out an indication, which seemed here to offer itself, and gave sulphuric acid, in doses of ten drops, three times a day. A poultice was placed over the abdomen, with a drachm of laudanum in it. Should this treatment fail, I shall modify the treatment, and place the man on other remedies, which prove generally successful, as the various preparations of opium; ipecacuanha, alone, or combined with mercurials; mercurials, as purgatives, followed by castor oil, or the oil alone; or depletion to the anus or abdomen.

In my next lecture, I shall enter, at length, into the various modes of treatment, employed in dysentery.

CLINICAL REPORTS.

PENNSYLVANIA HOSPITAL.

[Reported by HENRY H. SMITH, M.D., Resident Surgeon.]

1. *Successful operation for Lithotripsy, in a boy, thirteen years of age, by J. RANDOLPH, M. D., Surgeon to the Hospital.*

GEORGE HOUSE, æt. thirteen years, was admitted into the hospital on the 30th of March, 1838, for stone in the bladder. Eleven years since, he suffered from the same complaint, for which he was cut by Dr. RANDOLPH. The stone was removed entire; no water was passed by the cut after the first day, and the wound united by the first intention. On his admission to the hospital, he suffered frequently from fits of stone, which were relieved by anodynes and hip-baths.

On the third of April he was sounded by Dr. RANDOLPH, and the stone distinctly heard. He was kept on light nutritious diet. After the sounding, his urine had a small quantity of sabulous matter in it. The boy had been spoiled by indulgence at home, and the sight of the instruments caused him to cry. After two days, a metallic bougie was introduced, so as to dilate the urethra, and accustom it to the instrument; this was practised daily.

April 8th—A large sized bougie was introduced without much complaint by the boy. Urethra small for one of his age.

April 10th—Dr. RANDOLPH, in the presence of Drs. SMITH, PEPPER, and MEIGS, introduced a small sized instrument of Jacobson, and caught the stone immediately. The boy complained slightly, but his complaints evidently arose more from fear, than from any considerable pain, as, during the greater part of the time, he raised himself on his elbows, to observe the operation. The stone was easily broken on the first seizure, and again on the second;

the boy was then put to bed, and ordered a hip-bath, and ten drops of laudanum.

April 11th—He has passed several fragments of stone; suffers much on making water; fecates with difficulty; ordered hops, boiled in vinegar, hot, to the perineum, in bags of flannel. Half an ounce of castor oil.

April 13th—Since last day, has passed three large pieces of stone, without much pain; great relief from applications; says he feels quite easy.

April 16th—Was sounded yesterday by Dr. RANDOLPH; stone broken into several fragments; has passed, since last day, several pieces of stone; suffers little at present; formerly he had several paroxysms in a day.

April 17th—Has passed a large piece of calculus, which caused much pain and some little fever; is otherwise doing well. Ordered pulv. Dover. gr. iv., ol. cinnam. gtt. 4, twice a day.

April 18th—Dr. RANDOLPH operated in presence of the class; the stone was readily caught and crushed; the boy says the operation gave him little pain; ordered hip-bath, and laud. gtt. x., at bedtime.

April 19th—Rest well; is quite easy; passed several pieces of stone, and much sabulous matter; continue laudanum at night.

April 22d—Passed more stone; small piece fast in urethra; continue treatment; hip-bath and injection, &c.

April 23d—Penis much swollen and inflamed; stone still in urethra; continue treatment; inject eighteen drops laudanum; hip-bath, &c.

April 24th—Passed large piece, apparently the oval end of the stone; inflammation of penis disappearing; no pain; able to walk about, without inconvenience; urine clear.

April 25th—Has passed a large piece of central portion of stone last night; suffers no pain.

April 27th—Dr. RANDOLPH caught stone three times easily, and broke it fine; says it caused little pain.

April 28th—Passed much fine sand; doing well.

April 30th—Sounded by RANDOLPH; piece of stone detected; bladder nearly free.

May 1st—Passed a large piece in the evening, which caught in the urethra, near the orifice, and was removed by the forceps; able to hold his water four hours; urine tolerably clear; suffers little.

May 3d—The boy is comfortable; some deposit in the urine; ordered uva ursi 3ss., carb. sodæ 3j. in a pint of water, wine-glassful every three hours; walks about.

May 7th—Operated upon by R.; a piece which was at the neck of the bladder, was pushed back by the sound the instant it was introduced; caught stone at once, of considerable size; broke it twice.

May 9th—Has passed numerous pieces of stone; holds his water four hours; suffers little; walks about.

May 11th—Sounded yesterday; the stone in numerous pieces, several of which have been passed; urine quite clear; continue tea.

May 13th—The stone, in fragments, was caught four times; little pain; running in the yard in the afternoon.

May 14th—Easy; passed a great deal of stone, mostly sandy.

May 20th—Since the last date, the boy has been going about; has passed no more stone; suffers no pain; holds his water; sounded by Drs. RANDOLPH and SMITH; no stone felt.

May 25th—Sounded again, and nothing felt; his urine was tested, and proved acid.

May 26th—Discharged, completely cured.

2. Case of incised wound of Abdomen,—stabbed May 7th, 1838.

William Early, æt. thirty-four, admitted at a quarter before one o'clock, P. M., May 7th, 1838. Wound in right side, in false ribs, of two and a half inches in length; penetrated obliquely; probe entered four inches; bleeding freely on entrance; pulse weak and slow; face pale; extremities cool; slight flesh wound in groin close to artery; wound dressed with straps out of house; ordered laud. 30 gtt., one stitch through muscles and integuments, dry lint and compress to wound, tight bandage from pubes to chest, little weak wine water.

Night—Skin warm and dry; pulse stronger; complains of pain on breathing; bandaged to prevent action of diaphragm; laud. 80 drops.

May 8th—Pulse quick and tense, ninety-two in minute; respiration forty-four in minute; bowels not opened; passed water freely; no sickness of stomach; pain in pubic region on pressure; V. S. 3xiii., cal. gr. ij., opii gr. j.; pills every three hours; cold drinks acidulated; neut. mist.

Night—Leeches, four dozen, to abdomen, and warm poultices.

Ten o'clock—Pulse strong; V. S. 3xvi.

May 9th—Unable to pass water; introduced catheter; bowels opened by injection, slightly; some tympanitis; continue treatment.

Night—Pulse active and strong; repeat leeching.

May 10th—Skin moist; less pain in abdomen; gums touched; stopped cal.; ordered dose oil, and opii gr. j., every three hours; gruel diet; continue poultice; injection at night of assafœt.

May 11th—Abdomen soft; slight pain on pressure; slight tympanitis; oil operated slightly; repeat oil; continue treatment.

May 12th—Bowels opened freely; slept well; tongue clean; pulse ninety-six, and soft; no tympanitis; dressings removed; wound partly united; dressed with strips and lint; continue treatment.

May 13th—No pain; countenance good; pulse soft; skin moist; wound re-dressed; slight serous discharge; little pain any where on pressure; slight pleuritic pain; ordered mist. neut. 3vi., ant. tar. gr. ss., a table-spoonful of each.

May 14th—Bowels freely opened by mist.; pulse good; skin soft and moist; considerable discharge from wound—think from an abscess in lower portion of wound, external to ribs; dressed with plaster and compress.

May 25th—Walking about.

3. Case of compound comminuted fracture of both bones of leg; died in seven days.

Thomas Gillet, æt. thirty-six, was run over by a mail waggon, heavily loaded, on the 7th of May, at four o'clock, and was immediately brought to the hospital. The right leg was fractured in the

tib. and fibula, below the knee; a longitudinal fracture of tibia of three inches in length; piece protruding at wound three inches above ankle, with oblique fracture of both bones at same point; great effusion of blood under fascia, near knee; bad constitution; intemperate; drinks over half a pint daily; dry lint, compress over wound, which bleeds freely; leg loosely bandaged, in fracture box and lead water cloths; laudanum thirty drops, at once, and one hundred and ten at bedtime.

May 8th—Slept none; complains of pain; starts at every thing; incipient mania a potu; laudanum; soup with pepper; leg untouched.

May 9th—Dozed a little; leg less painful; dressing removed; wound has bled freely; bone projecting from it; loose from tibia, but muscles adherent; great effusion, as high as knee, of blood; great edema; wound enlarged with bistoury, and free access given to coagulated blood; tendency to sphacelus, as high as knee; dressed with large warm poultice, covering whole leg; fracture box; morph. sulph. gr. ss., every four hours; full diet and porter.

Night—Slept some during day; no pain in limb; continue treatment.

May 10th—Mortification has extended half way to groin; leg much swelled; pulse feeble and quick; skin cold; face bronzed; tongue like a chip; bowels opened by injection; ordered fomenting poultice to whole leg, flaxseed to thigh, quin. gr. j., every hour, full diet, and brandy punch in addition to former treatment.

May 11th—Mortification has reached groin; pulse exceedingly feeble and fluttering; skin cold and clammy; facies hippocratica; continue dressing to leg; continue treatment, with morph. every four hours; repeat punch and porter.

May 12th—Vomits every thing; extremities cold; pulse scarcely perceptible; ordered ammon. mist. and brandy by injection; same dressing.

May 13th—Sinking; continue treatment.

May 14th—Died this morning, at one A. M.

List of Accidents, admitted into the Pennsylvania Hospital, from June 27th to July 11th, 1838.

One case of lacerated wound of the hand, caused by the bursting of a pistol: a piece of wadding lodged in the hand, and was removed—wound poulticed, and the hand placed on a splint. Pus travelled under the fascia, which was freely opened; and the wound is now doing well. One case of lacerated wound of the head—poulticed, and afterwards dressed with mucilage; now granulating kindly. One case of dislocation of the head of the os humeri, inwards under the pectoral muscle, of ten days' standing. The man, a sailor, had fallen from under his feet, on the deck of a vessel, at sea, and struck his shoulder. The dislocation was reduced by Dr. NORRIS, with the pulleys, after a large bleeding, and the administration of tartarized antimony; clavicle bandage afterwards applied, and the man was discharged, at his own request, the next day. One case of lacerated wound of the thumb, from the bursting of a gun, a portion of the muscle of the ball of the thumb being torn up, and exposed: poulticed, wound sloughing, and doing well. One

case of oblique fracture of the upper third of the os femoris, caused by a fall from the third story of a house, in a fit of intoxication; symptoms of concussion of the brain were also present: the fracture was dressed with Physick's modification of Desault's splints; the man was very freely stimulated, and bladders of ice applied to the head; died in twenty-four hours. One case of lacerated wound of the hand, in a child, seven years of age, caused by the discharge of a gun, (loaded with powder and paper,) upon the hand, while on the muzzle of the gun. The wound extended between the metacarpal bones of the first and second fingers, dividing the palmar arch. There was no hæmorrhage, except from a small superficial vessel, which was taken up. The edges of the wound were drawn together by adhesive straps, and a dressing of dry lint applied. Cold applications were kept up by means of a syphon, and, at the present time, after a lapse of six days, the child has suffered very little pain, and has not had a bad symptom. The dressing has not been disturbed. One case of fracture of both bones of the leg, just above the ankle,—dressed with fracture-box, and cloths of lead-water. One case of contused wound of the thigh, caused by a piece of iron, plunged, red-hot, from the forge of a blacksmith, into the thigh. The iron passed to the depth of about three inches through the limb. The hæmorrhage that followed was inconsiderable, and the wound was dressed with a poultice, a tourniquet being loosely applied.

The cases, mentioned in the last number, are still under treatment.

DOMESTIC SUMMARY.

Mortality of Philadelphia.—During the week ending 14th July, a week of intense heat, the mortality of Philadelphia has exceeded that of any period, since the epidemic of Asiatic Cholera, in 1832, being greater, by about a hundred deaths, than is usual, at this season, in healthy summers. The mortality has been principally confined to children. Of the two hundred and thirty-one deaths, ninety-four were of children under one year, and a hundred and forty-five, of children under twenty-one years. Fifty-seven deaths are credited to summer complaint, and seventeen to excessive heat.

Jefferson Medical College of Philadelphia.—Under the new charter and organization of this institution, all the officers ceased to exist as such, except the old trustees, who were continued by the new charter. It became, therefore, necessary to appoint professors to the vacant chairs. All the former professors were, accordingly, unanimously re-elected.—*Amer. Med. Int.*

Medical College of Ohio. Dr. Mussey.—Dr. Mussey, of Dartmouth College, has accepted the professorship of surgery in the Medical College of Ohio, which cannot fail to be largely benefitted by the transfer.

Medical College of Richmond, Va.—The trustees of Hampden Sidney College, having organized a

medical department in the city of Richmond, Va., lectures, we learn, will commence there on Monday, the 5th of November, 1833, and will be continued until the last week in March.

Pennsylvania Medical School. Dr. N. R. Smith.—We learn that Dr. N. R. Smith, of Baltimore, has accepted the Chair of Theory and Practice of Physic in this school: but that he will continue to reside in Baltimore except during the winter session.

An account of the use of the Bark of the Slippery Elm Tree (Ulmus fulva) for Bougies, Tents, Catheters, and similar purposes in Surgery. By WILLIAM A. McDOWELL, M. D., of Fincastle, Virginia.

In 1819, the use of slippery elm tents was recommended to my attention by my friend, Dr. John Fleece, of Danville, Ky., as more easily introduced, more pleasantly worn, and better adapted to keep an issue or seton open, than any others. His assertions were amply sustained, by the effects produced in the case of a gentleman whom we there jointly attended.

Lumbar Abscess.—From a lumbar, or psoas abscess, the pus had descended to the thigh, and was there lodged, not under the fascia, as is common, but deep-seated, around the bone, of which the periosteum was destroyed. An incision, or puncture, had been made into the abscess, with a bistoury, about the middle of the thigh. This puncture was liable to obstruction, by curdly lumps, that floated in the pus, and such obstruction was always attended with great increase of tension and pain. The case seemed hopeless; but an enlargement of the fistula was obviously proper, and the patient objected to the use of the bistoury. It was in this situation, that the alternative of a slippery elm tent was determined upon.

A strip of the seasoned inner bark, long enough to reach the bone, and to leave an external portion to be bent down over the skin, (by which it could be withdrawn,) smoothly polished, rounded at the point, and shaped as nearly to the size of the puncture as we could get it, was dipped for a few seconds in tepid water. Covered with mucilage, and so slippery that it could with difficulty be held in the fingers, it was introduced into the sinus; where it remained twelve hours, without (according to the patient's report) producing one disagreeable sensation. On its removal, the sinus was found to be enlarged from one-fourth to one-third of an inch, by the expansion the seasoned tent had undergone. Another tent was now prepared, of the size of that just removed in its expanded state, to be next introduced; and so on, in succession, they were used larger and larger, until the opening was made as wide as seemed necessary, without pain, or effusion of blood.

Mammary Abscess.—Tents of this description, I have found particularly advantageous in the treatment of mammary abscess.

In cases of deep-seated abscess, but not answering the description of a disease under that name, as given by Mr. Hey, (such I never saw,) but in cases, or more especially in a case, of long standing, with deep sinus, dipping into and through the

mamma, with the gland in an indurated, rough, and enlarged condition, I was completely successful, by tenting the different sinuses.

A case of this description had been pronounced cancerous, and I was employed on account of the belief that extirpation must be performed. The tents were made thin, and softened in water, until their flexibility admitted of their following the devious course of the sinus, without the application of force or violence. In six or seven days, the secretion of healthy pus commenced throughout the sinus.

The external openings were enlarged in this, and in most cases, through the skin, with the point of a lancet, previous to introducing tents. After the secretion of healthy pus occurs, the tents should still be made as wide as ever, but a little shorter every day or two, and thinner at the point, and at the sides, that no violence may be done to the granulations.

Gun-shot Wounds.—In all abscesses, sinuses, or wounds, that require tenting, the slippery elm merits a preference. To widen a sinus, or to prepare it for the extraction of loose bones during the process of exploration, their superiority is obvious.

A young man of this town, walking behind a companion whilst hunting, and almost in contact with the muzzle of the gun, received the contents of his musket, shot and wadding, (accidentally discharged,) in his shoulder. About an inch of the centre of the clavicle was shattered, and the fragments carried deep into the wound. Some of the shot passed out through the scapula, and some posterior to and below the middle of its basis; the rest, together with most of the wadding, (which was of dry leaves,) and portions of the clavicle, lodged against its flat side. This wound was tented, with broad and thin tents, to keep the opening wide, yet not to prevent discharge, until all the foreign matters were removed with slender forceps, and until the wound healed from the bottom outward.

Strictures.—Jan. 13, 1831, I visited Mr. C——, at his father's, in this county, near Haweytown. I found him shut up in a stove room, heated to about 100 degrees, and rolled in blankets, yet tormented with rigors; his emaciation extreme, complexion chlorotic, tongue furred, and countenance unhappy. Mr. C——, (now Dr. C——, of Indiana,) had some weeks previously returned from North Carolina, where he had been advantageously engaged in gold-mining, until he was interrupted by the violence of the disease. It had been gradually increasing for more than three years; within which time, he had been under the management of several physicians—some of them eminent. They afforded him none, or but very transient, relief. From his mines he visited Charleston, and several intermediate places, in quest of surgical aid; but deriving no benefit, he returned to the mines in despair, sold them, and relinquishing all his golden expectations, came back to Bath-Court, to die among his kindred. On arriving at his father's, he put himself under the care of a physician, whom I conceive to be inferior in professional ability to but few in Virginia. After enduring his management for about four weeks, Mr. C—— abruptly dismissed him and sent for me. He said Dr. — had cauterized him nearly to death, and in despite,

too, of his repeated protestations, that this plan had been tried over and over before, and had failed; and he even shuddered as he spoke of his sufferings. The stilet, I learned, had also been used with no better effect.

I inserted an ordinary bougie, of which he had a variety, and at the distance of about three inches, met with a stricture opposing firm resistance: the largest bougie it would admit was smaller than a crow's quill. Not knowing what exactly to do for the stricture, I did nothing. For his general health, I prescribed a purgative of salts and magnesia, and a blue pill of five grains, to be taken daily; a hip-bath occasionally; and a gradual reduction of the temperature of his chamber; leaving him with a promise to visit him again in a few days.

In the course of my reflections on the case, it occurred to me, that one of those expanding slippery elm tents, might be shaped into a bougie, that would expand and cure this stricture; and I forthwith rode out and made the trial. A piece of dried inner bark, shaped to the size of a bougie that would pass the stricture, and slightly tapered, was, after remaining a few seconds in tepid water, passed through the stricture; pushed firmly into it; and suffered to remain four hours. It produced less uneasiness than was anticipated: of pain there was none, and the uneasiness seemed to be overbalanced by the mental relief arising from the contemplation of a new project. On removing the bougie, which required a severe pull, a perfect impression of a stricture, from a fourth to the third of an inch broad, was indented around it; rough, and pitted on one side, as if it had been impressed with a thimble. The bougie had expanded considerably, except that portion of it which was embraced by the stricture. There it appeared but little enlarged, and the bulge beyond had caused the difficulty of extraction. I now prescribed the introduction of such a bougie, every day or two, to be retained as long as it could be tolerated; a blue pill to be taken every third day, and the bowels to be kept open with saline purgatives. The dilatation was at first very gradual; but in ten or twelve days, so large a bougie was required, that it became necessary to double the bark, by gluing the flat sides of two pieces together. On the 17th February he was dismissed cured, and has never since been troubled with the disease.

The slow progress (when compared with any other case that I have since encountered) and difficulty, in the dilatation of this stricture, I have ascribed to the oft-repeated incisions with the stilet, and the ulcerations from the caustic, having converted its inner surface into a cicatrix, with diminished expansibility.

The bougie here recommended, and brought by this case directly in comparison with the caustic and the stilet, it must be evident to any one acquainted with these diseases, is not calculated to supersede either of them; and I recommend it only as an additional agent in treating strictures; yet, in a great majority of cases, it is decidedly superior to either, or to any other plan of which I have any knowledge. It is particularly adapted to all strictures, proceeding from spasmodic contraction, or from circular thickening of the membrane, or

from callosity, or indurated enlargement of the surrounding corpus spongiosum, or of the prostrate gland.

But in case of obstruction from a thickening of one side of the urethra, projecting as an excrescence into the canal, in the form of a wart, I can conceive nothing short of extirpation to be adequate to effect a cure; and no plan strikes me, as so eligible for effecting this, as the application of caustic. The stilet would be wholly inadequate, and from the expansive bougie, only temporary relief could be anticipated. It is true, that tumours, even warts, may sometimes be removed from the surface of the body by pressure; but it must be long continued and firm, to a degree not to be endured on a structure so delicate as that of the urethra. In cases of total obstruction, from filling up, or obliteration of a considerable length of the urethra, the stilet is, I conceive, without a rival; and we have no alternative to it but incision through the integuments.

Fistula in Perinæo—Case.—In October, 1824, I visited a negro boy aged twelve, the property of Mr. M—, of this county. He had several fistulous openings in the perinæum, through which he passed all his urine. There had been considerable sloughing of the part, and that process still continued. On passing a sound into the urethra, I found the part within the scrotum filled with a calculus. I pushed it back, enlarged one of the sinuses, and extracted it. I prescribed a course of treatment calculated to produce present relief, and requested his master to send him to town as soon as he was well enough for farther treatment. He was so much relieved, that he was not sent until the following spring; when, on the 9th May, I made incisions through the callus of the fistulas, from the perinæum to the urethra, and suffered him to pass no urine without a catheter, until the part had healed. When it was found that all his urine flowed by the natural channel, I permitted him to return home; but advised that his urine should still be passed by the catheter for a few weeks; which, unfortunately, was neglected, and a fistulous opening made its appearance again. The disease progressed, and was unattended to, until May, 1834, when he came to town. There were now several fistulas, proceeding from different orifices in the membranous portion of the urethra. From the anterior sinus forward, the urethra was totally impervious for the space of at least two inches—filled with a grisly callus. He was much reduced, and laboured under hectic, with copious night sweats.

Before proceeding to any operation, except to widen, externally, one of the fistulas, that the urine might descend with less interruption, I kept him thirteen days on a course of alteratives and tonics. The time was more than was requisite; but I had difficulty to determine in what manner I should operate, or whether I would operate at all. The negro's supplications at last determined me in the affirmative; and I proceeded to make an opening through the obliterated portion of the urethra, with a stilet. A silver catheter was then introduced into the bladder, and the fistulas were incised, the wound dressed, the silver catheter removed, and one of elm bark introduced into the bladder, and then kept fixed, until all was healed. On the 21st

of June, he returned home in good health. A small fistula has since occurred, and remains, but does not increase, nor impair his health. This man never kept his bed one entire day after the operation; but walked the streets more or less every day during his stay in town, with the catheter in his urethra; from which he never, during the time, complained of either pain or uneasiness.

The catheter of elm bark is thus prepared. I take a thin strip of the inner bark, from one to one and a half inches wide, seasoned just so much as not to destroy its pliability, level the edges, and smear them with mucilage or glue; wrap the bark either spirally or longitudinally around a stilet, and roll with tape. The wire should be smeared thinly, but completely, with beeswax and tallow, to prevent its being retained by the glue. A good mechanic could make a nice article of this kind, which for the purpose of being left in the urethra, when a case may require such treatment, possesses great advantage over any other catheter; for when thus left, coated with mucilage, instead of acting as an irritant, it proves a fine emollient to the inflamed or lacerated parts.

Fistula Lachrymalis.—I have treated three cases of this disease with slippery elm bougies. In two of them, a slender probe could be passed, from the abscess, through the *ductus ad nasum*, into which bougies were introduced. Cures were effected in each case in about a fortnight.

The other case was that of a lady, whom I attended in the spring of 1833, at James River forge. She had laboured under the disease for several years. The duct was completely obliterated. I perforated the callus that filled it, with a sharp, triangular pointed probe, and inserted successive dried elm bougies, until it was dilated to the full natural size. I then kept it tented for four weeks, with bougies of the *fresh bark*, before the external opening was suffered to heal. The cure is perfect.

Several physicians in this neighbourhood have, on my recommendation, treated strictures with these bougies, and express themselves as well satisfied of their superiority as I have been.

Calculus and the Operation of Lithontritie.—There is no aspect in which I have ever considered, in a more favourable point of view, the benefit which is likely to result from the expanding property of the slippery elm bougie, than in relation to Civiale's operation of lithontritie.

I cannot but indulge the pleasing anticipation, that, with such assistance, the invention of that great benefactor of his race must eventually set aside the gorget and the staff, as a forlorn hope, to be retained only as a dernier resort, and not to be required to achieve a triumph over calculus once in a hundred cases.

The power of a lithontritor, from a half to three-fourths of an inch in diameter, upon calculus in the bladder, needs no description. It is easily conceived in idea; and yet it is no mere ideality, or idle creation of fancy, to believe that one of that size may be introduced. The urethra can be so expanded as to admit such a lithontritor. That it can, will be evident to any one who will duly consider the anatomy of the part, and the size of calculi that have passed through it. And, more-

over, I have dilated it with bougies, to an extent exceeding the minimum of those measures, with but little effort, and without producing pain.

I have now in my possession a calculus, the greatest transverse diameter of which is six-tenths of an inch, the least, or that of the flat side five-tenths, the longitudinal eight-tenths, carefully measured, that passed spontaneously from a female patient in 1825, whilst using anti-lithics and diuretics; viz., aqua calcis, spts. nitre, and decoction of mallows. Arterial action was kept down by blood-letting. Sir A. Cooper extracted eighty through the urethra, with forceps. The urethra indeed seems constructed for expansion, almost as perfectly as the vagina; it is full of longitudinal folds or rugæ, which when simply unfolded, more than double its dimensions, even without drawing upon its elasticity, which is as great as that of any other part of the body; for we see it contracted into strictures, from slight irritation; and expanding into sacs, of astonishing dimensions, by the force of the urine, impelled only by the moderate contractile power of the bladder; and the division of the prostate gland into lobes, and its spongy texture, well adapt it for yielding to dilatation.

I think it difficult then to say, to what dimensions it would be unreasonable to suppose the adult urethra might be dilated, by the very gradual expansion of the bland emollient material here recommended.

Over half an inch would not, I can declare from experience; and it was with a view to be able to speak more experimentally, on this portion of my subject, that I so long delayed to communicate an improvement, that I consider so important in treating strictures, with the expectation, that I might encounter a case of calculus, that would justify a dilatation to the extent that the membrane was capable of bearing. But this is not the region for calculus, and I have neither met with, nor heard of a case, since commencing the use of this material for bougies.

The process of dilatation, with this substance, is calculated to prove beneficial, too, not merely in affording more room for action, but by lessening the irritability and sensibility of the parts, and thereby preparing the patient to endure a lithontritor for a much longer time, as well as of greater size; in illustration of which I will adduce a few facts. It is familiar to every one who has been under the necessity of introducing catheters or bougies, daily or oftener, that the first introduction is the most painful, and that each successive operation becomes less and less so, until at last nothing more than a pleasant titillation is experienced, but little, if any, greater in degree than was formerly experienced from the passage of the urine. And such is the case with every part of the body, as illustrated in the pituitary membrane, by the snuff-taker, in the retina, by the refiner and the glass-blower, and in the soles of the feet, by the pedestrian.

Independent of any effort of dilatation, we are informed, that Civiale always introduced a catheter or sound for several successive days previous to operating with the lithontritor, "to lessen irritability," and generally suffered it to remain in the urethra for several hours, and more especially,

when the parts were unusually irritable. In one very irritable case, which he has related, the first introduction of the sound gave very great pain, but after operating with the lithontritor, so much had sensibility been diminished, that the passage of sand and gravel gave none.

A lady, upon whom I had performed the operation of lithotomy, in 1819, in Danville, Ky., had used anti-lithics, prescribed by quacks, by injection through the urethra—caustic alkali, among others—until the sensibility was so far impaired, that she was insensible to the contact of any thing that was applied to the part.

The surgical works and medical periodicals of latter years, abound in redoubtable obstacles to Civiale's operation; most of which have reference to the irritable state of the bladder and urethra, from the long continued pressure of calculi. An answer to all of which I conceive to be comprised in my preceding remarks on irritability. Others are worthy of more particular consideration, among which, enlargement of the prostate gland is generally advanced, as constituting an insuperable obstacle. The difficulty of introducing the instrument here, seems to be the insurmountable part of the process. Now this *can* be surmounted by the elm bougie; but the question recurs, would it be advisable? In answer, I will venture as a surmise, that the pressure, from long continued efforts at dilatation, might chance to excite such a change of action in the part, as to effect a cure of the gland. A trial, surely, could not be amiss in a disease which is reckoned incurable. I have witnessed such results in indurated mammary glands, and why should I not in similar affections of the prostate? The effect of pressure made by bandages on external indurated parts is a familiar illustration.

Although I can admit no urethra to be too irritable, or too tender, no plurality of calculi too numerous, nor any stone to be too large for lithontritie, with a properly dilated urethra, yet there are cases wherein the lithotomist must come in aid. Patients who have stones that are encysted, I should not conceive to be safe subjects for lithontritie. But this is rare, and a surgeon who is master of his business can always detect it with the sound, before proceeding to any operation. And calculi sometimes, though still more rarely, adhere to the bladder. Morgagni gives an account of a large stone, with part of its surface thus attached. In the case of a gentleman on whom I performed lithotomy in Kentucky, a stone, the size of a hen's egg, adhered to the bladder with such firmness, that it was extracted with great difficulty. On coming away, about one-fourth of its anterior lamella was wanting, and was found attached to the bladder, so firmly that it required time and considerable force with the scoop and fingers to detach it. Such cases would be detected with a sound, or with the lithontritor, by turning the instrument once or twice round, after grasping the stone,—a precaution that should, at all events, and in every case, be observed, to gain assurance that no portion of the bladder was grasped with the stone, by the forceps.

Those two situations *alone* appear to me as exclusively requiring the operation of lithotomy.

Other contra-indications that have been arrayed against lithontritie, such as diseased bladder, scirrhous prostate, severe affections of the kidneys, or of important vital organs, or calculus in very old men, with glairy urine, &c., are, I conceive, equally inauspicious to either, and every operation.

Some caution is necessary in using bougies or catheters of elm. Although this bark possesses a degree of tenacity surpassed by that of but few trees of the forest, yet when seasoned, and in a very dry state, it would be liable, in the hands of a careless, or awkward operator, to break off in the urethra or bladder. To obviate this danger, it should be immersed in water, for a longer period when it is very dry, which will restore tenacity to its outer fibres.—*Western Journal of Medical and Physical Sciences*, October, 1837.

FOREIGN SUMMARY.

Instrument for the dilatation of the Meatus Urinarius.—The obstacle, opposed by a narrow meatus urinarius, particularly in children, to the operation of lithotritry, Dr. Labat, of Paris, proposes to remedy by the following dilating instrument. It is shaped like a small key, having, in place of wards, two blades, eight or ten lines in length, which, when brought together, form a stem, slightly conoidal, and fine enough to enter the narrowest meatus. Each of these blades, being traversed at its base, by a quadrilateral groove and screw, they may be gradually separated, so as to give the meatus a dilatation, sufficient to receive lithotritry instruments of the largest size. This instrument the doctor has also successfully used for the dilatation of a stricture, situated five lines from the meatus urinarius.—*Gazette des Hopitaux*.

Results of the Revaccinations, practised in the Prussian Army, during the year 1836.—42,124 individuals were revaccinated, 32,633 of whom bore the cicatrices of previous vaccination. In 6,545, these cicatrices were doubtful; in 2,840, there were none. In the revaccinations of this year, there were regular pustules in 18,136 individuals, irregular in 9,940. In 14,048, vaccination was at first unsuccessful, but, upon repetition, it succeeded in 1,569, and failed again in 8,205 cases. The number of pustules varied in the different individuals from 1 to 30. Among those who had regular pustules, 7,311 had from 1 to 5 pustules; 5,647 from 6 to 10; 4,418 from 10 to 20, and 700 from 21 to 30.

Of the individuals, revaccinated in 1836 or previously, 14 were during this year affected with varicella, and 8 with varioloid. But there was not a single case of pure variola.

The vaccination was in general practised with vaccine matter, freshly taken from the arms of infants, although it was sometimes necessary to use that taken from adults. Stale virus was rarely employed. The surgeons of the different corps disagreed in opinion, as to the greater or less efficacy of the virus from children or from adults; but direct experience would seem to show very little difference in their capacity of producing pustules.

If the results obtained in 1836, are compared

with those of preceding years, the conclusion is arrived at, that the susceptibility of contracting a new vaccination and consequently variola, increases every year. Of 42,124 individuals revaccinated in 1836, 18,136 cases were successful. In 1833, 48,478 persons revaccinated furnished only 15,269 successful cases; in 1834, of 44,454 revaccinations, 16,679 were successful; and in 1835, of 39,192, 15,315 were successful. The successful cases were, therefore, to the whole number, in the proportion of 31 per cent. in 1833, of 37 in 1834, of 39 in 1835, and of 43 in 1836.

In 1833, a first revaccination was unsuccessful in 4,161 subjects; but, repeated, it succeeded in 784; of 6,830 cases not followed by success in 1834, the repetition of the operation succeeded in 866; in 1835, in 9,411, it succeeded 1,465 times; and, in 1836, 1,569 times in 9,744 individuals.—*Medicin. Zeitung.*

On the Foreign Bodies which serve as Nuclei for Urinary Calculi, by M. Civiale.—At a late meeting of the Academy of Sciences, M. Civiale made some observations on certain modes of formation of calculi, an abstract of which cannot fail to be interesting.

An account of the nuclei which occasionally serve for the formation of urinary calculi is a neglected, though curious, point in the history of the latter productions. M. Civiale has made some researches with the view of clearing up several obscure facts, and has assembled together 166 cases, from an analysis of which it appears that the nucleus of the stone was formed in 32 cases by needles or pins; in 21 by bougies or catheters; in 14 by pieces of wood; in 13 by bullets; in 24 by fragments of bones, pipe stoppers, barometer tubes, or stems of plants; in 14 by the beards of barley or hairs; in 4 by pledgets of lint, and finally by rings, nails, fruit-stones, needle-cases, &c.

The greater part of the above cases present several interesting points, but we must confine our notice to those of recent date.

Pins or needles are the foreign bodies which most frequently serve as nuclei for stone. This probably depends on the facility with which they present themselves to a certain class of depraved individuals, although it is difficult to conceive in what manner females, more especially, can satisfy their passions with such instruments. A few needles, of from five to six inches in length, remained a considerable time in the bladder without having their points covered with calculous matter, and in a few cases only did they penetrate the bladder, vagina, perineum, &c.

The formation of calculi upon bullets, and other foreign bodies of a similar nature, gives rise to several physiological considerations of importance. In many cases these bodies have passed into the bladder through passages which the surgeon would never dare to traverse with the knife, and what is more remarkable, without producing, in many cases, any notable disorder or inconvenience. Thus, for example, pieces of wood from three to seven inches in length, bullets, &c., have remained for years in the bladder without giving rise to the insupportable pain, necessity of frequent micturition, &c., which

usually attend the presence of foreign bodies in that viscus.

The introduction of the nucleus is either accidental or intentional. In the former case the foreign body has found its way into the bladder in consequence of a wound, of a fall, of some fistulous communication between the intestine and bladder, or finally through the fault of the surgeon; in the latter case it, generally speaking, has been introduced by the patient himself, sometimes for the purpose of relieving a retention of urine, or pushing back a calculus; sometimes in a fit of momentary derangement; but most frequently in consequence of depraved and lascivious ideas. The effects produced by the foreign bodies in the bladder are extremely various. Sometimes they generate the highest degree of suffering and pain, which terminate rapidly in death; in other cases they seem to be scarcely felt by the organ, or the inconvenience which they occasion is purposely concealed by the sufferer.

In a therapeutical point of view the presence of these foreign bodies in the bladder is a matter of much interest. From the table to which we have already alluded, it would appear that in 12 cases only, of the 166, they were discharged spontaneously either from the bladder or by an artificial passage. This is a curious circumstance, when we consider that in many cases the bodies themselves are small, and of a rounded form. In 64 cases the operation of lithotomy was performed; the difficulty of the operation depending much on the size and shape of the nucleus of the stone. In 26 cases the foreign bodies were extracted through the urethra, without the aid of a cutting instrument. The majority of such facts is recent and connected with lithotripsy. M. Civiale has already published six cases in which he has extracted with success two elastic bougies, a bean, a pea, a stem of a plant, and a piece of straw. In his present communication he details two more cases; in one of which he extracted a fragment of a waxen bougie; in another, a portion of a barometer tube about three inches in length.—*London Lancet, from French Gazette, April, 1838.*

Mode of obtaining Creosote.—The following is an economical method of obtaining creosote, proposed by M. Cozzi. A quantity of tar is distilled in an alembic, and the products collected in a cylindrical vessel half filled with water. The products are acetic acid, eussion, paraffin, and creosote, which latter is recognised by its specific gravity. The impure creosote is isolated from the other products by means of a syphon, and on this being done, sulphuric acid, weakened with one-half water, is added; the creosote now mounts to the surface of this fluid, which is warmed by an admixture of boiling dilute sulphuric acid, and the supernatant fluid is drawn off and placed in an open-mouthed bottle, one-third filled. This is exposed to the air for three days, and the product is again distilled, when a reddish fluid is obtained. The latter having been treated thrice in a similar manner, furnished pure creosote, limped as water, of 1.007 specific gravity, and boiling at 205° R.—*Ib., from Jour. de Chem. Med., May, 1838.*